Summary of Reviewed Recent Trials of Home Dust Mite Allergen Reduction Interventions(1994-2000)

Author	Date	Method	Results
Warburten	1994	Randomized Controlled Trial of High Efficiency Particulate Filters filters in 12 British atopic asthmatic children.	No effect on airborne mite antigen nor clinical measures (peak flow, spirometry, bronchial hyper-reactivity, or symptoms).
Marks	1994	Randomized Controlled Trial of mite reduction including encasement plus tannic acid spray.	Short term but not long term effect at six months on bed mite levels. No effect on symptom scores, peak flow variability, lung function or Bronchial Hyperresponsiveness.
Sette	1994	Randomized Controlled Trial of benzyl benzoate foam spray on mattresses to reduce dust mites.	Intervention did not reduce mite levels or any clinical measures (Bronchial Hyperresponsiveness, or serum or nasal IgE).
Woodfolk	1995	Trial of the efficacy of Tannic Acid and other treatments, including benzyl benzoate moist powder, a 3% TA spray, and two carpet cleaners on mite and cat allergens in carpets within houses.	All treatments reduced mite levels but did not maintain low levels.
Weeks	1995	Randomized Controlled Trial of benzyl benzoate sprayed on carpet, mattress and duvet plus encasement on dust mite levels.	Encasement alone reduced mattress dust mite levels. Acaricide had no effect.
Bahir	1997	Randomized Controlled Trial of an acaricide and standard dust avoidance measures	Dust mite levels and symptom scores improved in all groups over the study period. No added benefit from acaricide. No clinical data reported.
Hayden	1997	Randomized Controlled Trial of dust mite reduction, including a combination of encasement , weekly washing, bedroom carpet replacement, living room tannic acid in asthmatic mite sensitive children.	Intervention and control had reduction in mite levels. Reduction in Peak Expiratory Flow Rate in intervention group.
Sporik	1998	Randomized Controlled Trial of encasement versus encasement plus anti-mite regular carpet shampoo on mite antigen levels.	Dust mite allergen levels fell in the treatment, placebo, and parental control groups. During the seven treatment periods, no differences were seen between the Der p 1 concentrations in the groups using the "anti-mite" shampoo, placebo shampoo, or the parental control group Mite levels in dust from uncarpeted floors and mattress encasements were low (4.1, 2.1 to 8.0 microgram/gm and 4.2; 2.6 to 6.5 microgram /gm, respectively)

Goetzche	1998	Meta-analysis of 23 studies of the efficacy of using chemical and physical measures to reduce mite exposure to reduce asthma symptoms.	Combined data did not suggest benefit of interventions on asthma symptoms or morning peak flow rates.
Lioy	1998	CT of Acarosan plus detergent versus detergent versus control on carpets and bedding in reduction of mite levels.	Reductions of mite levels on carpet but not mattresses achieved with both treatments. No benefit to Bronchial Hyperresponsiveness.
Arlian	1999	Population growth was determined for dust mites at daily relative humidity regimens of 2, 4, 6, and 8 hours at 75% or 85% relative humidity alternating with 22, 20, 18, and 16 hours at 0% or 35%	Dust mite (d. farine) populations declined at daily regimens of 2 hours at 75% or 85% relative humidity alternating with 22 hours at 0% or 35% relative humidity. Daily regimens of 4, 6, and 8 hours at 75% relative humidity alternating with 20, 18, and 16 hours, respectively, at 35% relative humidity provided sufficient moisture for small growths in population size.
Cloosterma n	1999	Randomized Controlled Trial of dust mite avoidance measures, including mattress covers and Arcosan on mite levels, peak flow and asthma symptom scores in 157 Dutch Asthmatics.	Mattress covers reduced mattress mite levels to 9.4%. No clinical improvement noted.
Shapiro	1999	Randomized Controlled Trial of mite reduction measures and asthma severity in 44 Seattle low income asthmatic children sensitive to mites.	Intervention reduced dust mite antigen levels somewhat and reduced bronchial hyper-responsiveness, but there was no improvement in symptoms or pulmonary function.
Nivin	1999	Trial of mechanical ventilation (to control of humidity and temperature) to reduce mite allergen.	Allergen levels fell in both intervention and control houses. Negative study.
Hirsch	2000	Study of installation of insulated windows and central heating on apartment bedroom mite levels.	Air exchange rate decreased and temperature and humidity increased and dust mite levels on carpets and mattresses increased.
Custovic	2000	Randomized Controlled Trial of infants with atopic family history of mite reduction, including encasement, vacuum cleaner, vinyl flooring, arcosan, benzyl benzoate, linen washing, and washable toys.	Reduction of mother's mattress dust mite levels achieved (25%) prior to birth persisting (98%) at 6 months and (98%) at 1 year. Reduction of bedroom floor levels 54%, 63%, and 27%.